

MEAN LAKE LEVELS DURING SEPTEMBER.

By UNITED STATES LAKE SURVEY.

[Dated: Detroit, Mich., Oct. 6, 1920.]

The following data are reported in the "Notice to Mariners" of the above date:

Data.	Lakes. ¹			
	Superior.	Michigan and Huron.	Erie.	Ontario.
Mean level during September, 1920:	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
Above mean sea level at New York.....	602.81	580.87	572.39	245.47
Above or below—				
Mean stage of August, 1920.....	-0.13	-0.14	-0.26	-0.15
Mean stage of September, 1919.....	+0.28	+0.06	-0.36	-1.39
Average stage for September, last 10 years.....	+0.17	+0.20	-0.02	-0.72
Highest recorded September stage.....	-1.27	-2.56	-1.55	-2.14
Lowest recorded September stage.....	+1.32	+1.21	+1.11	+1.47
Average relation of the September level to—				
August level.....		-0.20	-0.20	-0.40
October level.....		+0.20	+0.30	+0.40

¹ Lake St. Clair's level: In September, 575.44 feet.

MEAN LAKE LEVELS DURING OCTOBER.

By UNITED STATES LAKE SURVEY.

[Dated: Detroit, Mich., Nov. 4, 1920.]

The following data are reported in the "Notice to Mariners" of the above date:

Data.	Lakes. ¹			
	Superior.	Michigan and Huron.	Erie.	Ontario.
Mean level during October, 1920:	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
Above mean sea level at New York.....	602.68	580.55	572.05	245.29
Above or below—				
Mean stage of September, 1920.....	-0.13	-0.32	-0.34	-0.18
Mean stage of October, 1919.....	+0.27	-0.10	-0.42	-1.06
Average stage for October, last 10 years.....	+0.05	+0.08	-0.10	-0.52
Highest recorded October stage.....	-0.88	-2.39	-1.65	-2.52
Lowest recorded October stage.....	+1.10	+0.95	+1.25	+1.62
Average relation of the October level to—				
September level.....		-0.20	-0.30	-0.40
November level.....		+0.20	+0.30	+0.20

¹ Lake St. Clair's level: In October, 575.14 feet.

EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS, OCTOBER, 1920.

By J. WARREN SMITH, Meteorologist.

October was generally warm and dry, with abundant sunshine, in nearly all sections east of the Rocky Mountains, except that heavy rainfall occurred at some points in the west Gulf and lower Great Plains areas. These conditions were ideal for maturing fall crops and for outdoor work. Work was interrupted to a considerable extent, however, in some Rocky Mountain sections and in the far Northwest by stormy weather, with considerable snowfall.

The frost that was general at the end of September and the first of October in the principal corn-growing States resulted in very little damage to corn, as the crop had matured rapidly during the preceding two weeks and was mostly out of frost danger. Some late corn was injured in Illinois, but, on the whole, the crop was benefitted by the cool weather. Thereafter generally fair weather, with abundant sunshine, produced conditions very favorable for maturing the very late corn, and for harvesting and drying the crop, although husking and cribbing were checked by rain during the last decade of the month from Iowa and Missouri westward.

October was mostly dry, with moderate temperatures, in the cotton belt, except for considerable rainfall in the more western districts. Cotton opened rapidly, and the weather was very favorable for harvesting, except that rain the last half of the month interrupted picking in some western sections, particularly in Texas and Oklahoma. Some damage resulted to open cotton by rain in central Texas, western Arkansas, and in most sections of Oklahoma. The first general frost of the season occurred in the northern portion of the belt on the 29th and 30th, but no material damage resulted.

Rain was needed most of the month for seeding winter grains in many sections east of the Mississippi River, and the germination of winter wheat was rather poor in some areas. Soil moisture was generally sufficient, however, from the western Gulf region northward where seeding and germination was accomplished under favorable conditions. Wheat, especially, promised the establishment of a good root system before cold weather in the Great Plains States. At the close of the month the rain had set in over most eastern sections where drought had prevailed.

Pastures needed rain badly in the eastern States, where they were short and dry throughout the month, but west of the Mississippi River conditions were more favorable, and pastures and ranges maintained their former good condition. The rains and snows improved the ranges in the Rocky Mountain States and far Northwest and stock continued in good to excellent condition in these sections. They were largely on winter ranges by the latter part of the month.

It was too dry for truck in much of the South, but cool weather the first of the month was favorable for sugarcane in the lower Mississippi Valley. Sugar-beet harvest made mostly satisfactory progress, except for some delay by stormy weather in the Northwest. The weather was favorable for the harvest of deciduous fruits, and satisfactory yields were saved in good condition. Apples, especially, were plentiful in all sections of the country where that crop is of importance. Oranges were sizing up nicely in California and citrus fruits were maturing satisfactorily in Florida, with steadily increasing shipments.